

# **EXHIBIT 25**

**INTERNAL ONLY - REMOVE BEFORE PRESENTING**

**Last Updated:** October 17, 2016

**Questions:** mmills@ orcharliev@

**Usage guidelines:** Before you get started. Please note that:

- This deck can only be shared with clients under NDA
- Some slides can only be **presented** under NDA (cannot be shared under any other type of format)
- This deck should be modified before presenting (custom logos / slides by region in Appendix)
- The ideal use is to supplement reactive conversations with clients regarding inventory quality

**Target audience:** Advertisers and agencies who want to understand how we manage GDN inventory. To reiterate, this deck is only for **adwords advertisers under NDA**.

**For questions** contact your regional SPOS Display Expert

- AMER: lalford@
- EMEA: franciscov@
- APAC: ndu@

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## GDN Inventory Narrative

How we maintain a high quality network

## Agenda

- How does the GDN's network quality compare in the industry?
- Maintaining a clean network
- How we prevent invalid clicks
- What you can do to protect your ads

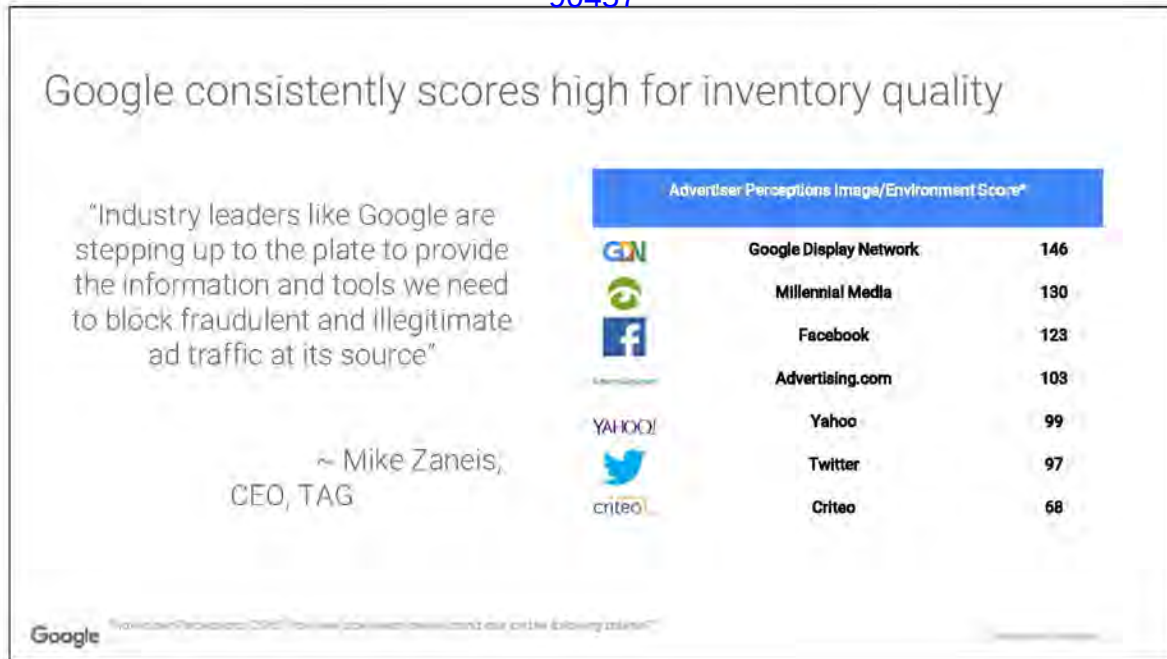
Google

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How does the GDN's  
inventory compare in the  
industry?

Google

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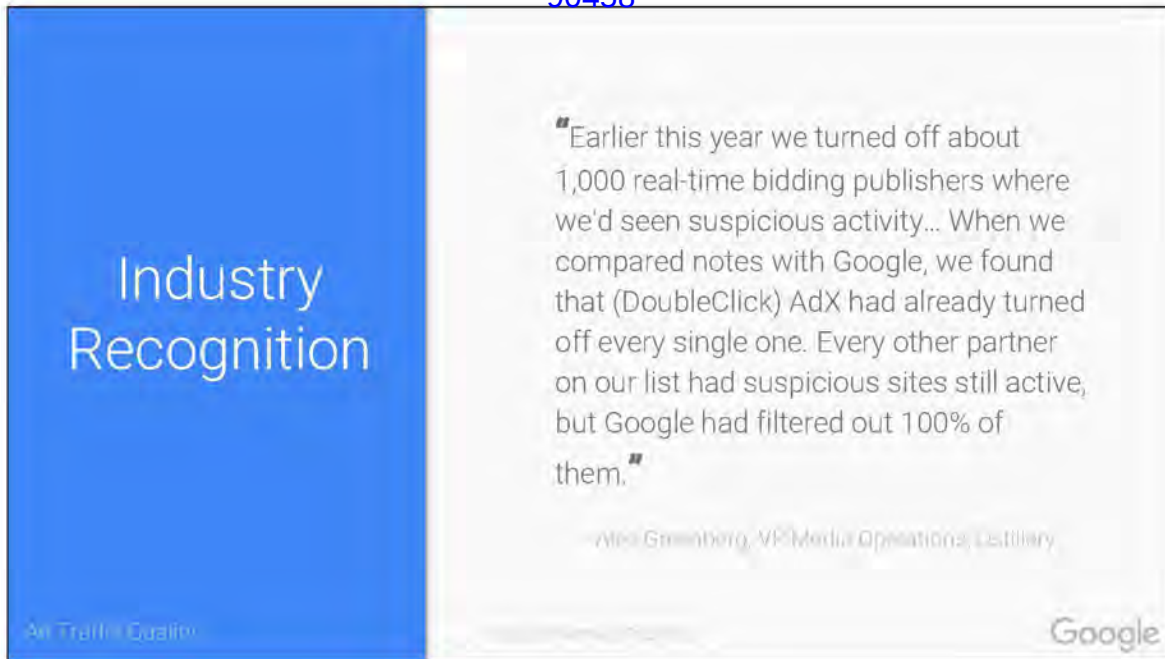
In separate studies conducted by Advertiser Perceptions we continually score and outperform the other exchanges. When advertiser's were asked, "How well does each media brand rate on advertiser's perceptions Image, the Google Display Network led the pack over Facebook, Yahoo, Twitter, and Criteo. The AdX, which accounts for roughly half of the inventory on the GDN, was ranked #1 by pixelate against OpenX and RhythmOne.

Info about Tag quote:

As you can see, TAG, the leading industry body fighting invalid traffic, has publicly recognized our leadership in this space. Multiple of our colleagues on product teams at Google are members of various TAG working groups <https://tagtoday.net/>

Source of quote

[https://docs.google.com/presentation/d/1UXwnO1EbwqQYF\\_7Y3XWWWDdb71NaQbakC3d-XU6P4A0/edit#slide=id.g726709514\\_0\\_6675](https://docs.google.com/presentation/d/1UXwnO1EbwqQYF_7Y3XWWWDdb71NaQbakC3d-XU6P4A0/edit#slide=id.g726709514_0_6675)



Other players in the industry also have recognized our leadership in the fight against invalid traffic.

Additional details here: [http://dstillery.com/wp-content/uploads/2014/02/DoubleClick\\_Case-study.pdf](http://dstillery.com/wp-content/uploads/2014/02/DoubleClick_Case-study.pdf)

More case studies with Dstillery: <https://www.doubleclickbygoogle.com/articles/payment-ids-now-available-doubleclick-ad-exchange/>





Use this slide to demonstrate the variability in quality inventory across exchanges.

A lot of this boils down to high standards. We want to reiterate why our multi-dimensional approach yields clean inventory.

This graph shows the distribution of invalid traffic across multiple exchanges on DBM

As you can see, not everyone has high standards

AdX continues to be one of the cleanest exchanges on DBM

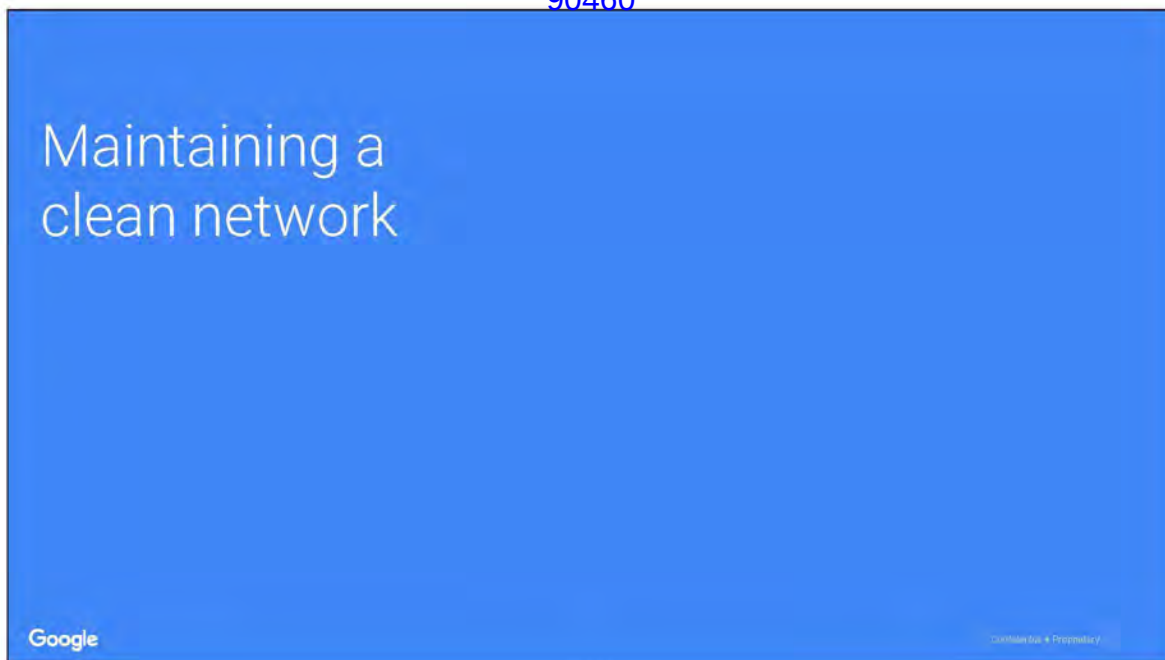
One of the key reasons that AdX is so clean is that we have strict policies in place that keep bad actors from the exchange

ADX also has the cleanest inventory. When compared to other exchanges (names are masked by letter characters), we have among the lowest percentage of invalid traffic compared to the other exchanges.

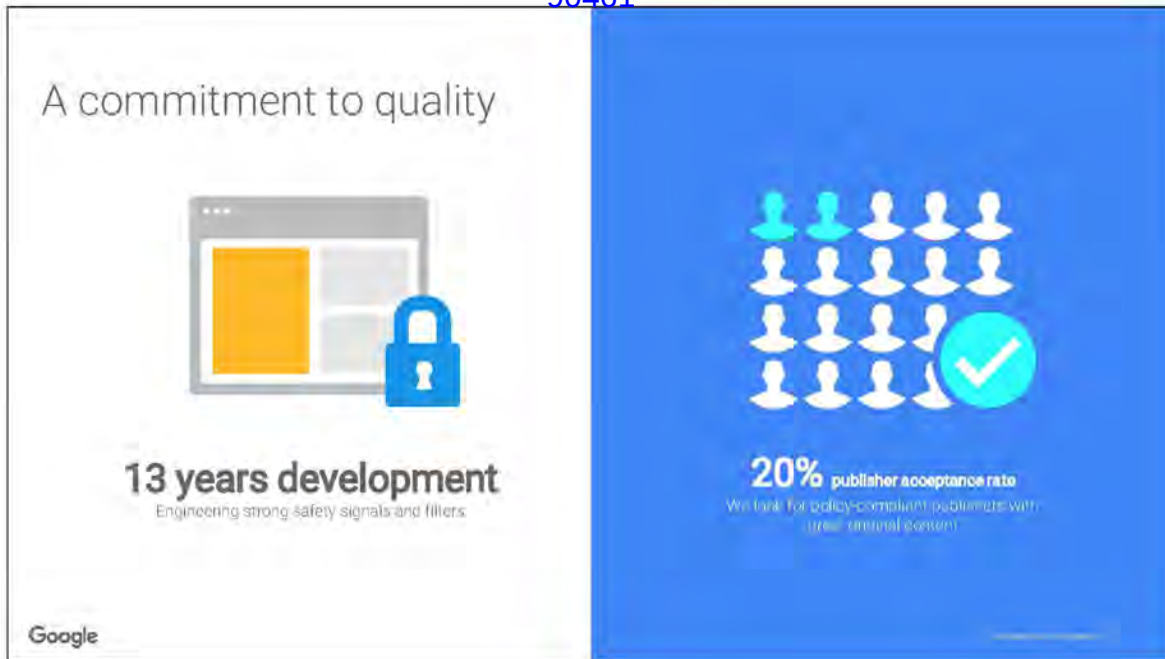
However, Invalid activity is not the same on all exchanges. It really matters who you are buying from, with some exchanges investing tackling ad fraud more aggressively than others. We can't name exchanges that are featured on this graph but we can say that pretty much all of the major players are featured here and that AdX towards the bottom of this graph. On top, more than 60% of the traffic is considered invalid

We could look at this slide and conclude that the ecosystem is broken. But I am going to make the case for these takeaways. Some people in the industry have invested, and are winning. Publisher or intermediaries need to think carefully about the company you keep and who you trust to look after your brand. Armed with the right information, there is tremendous value out there for advertisers. So that gives you some idea of the scope. Let me tell you how Google is thinking about the whole industry tackling fraud in our next section. Explanation of Graph (Optional Talking Points) The y-axis will show the different sources of traffic that our ads quality team monitor, and includes ALL the major supply sources. The x-axis is going to show the percentage of the traffic that is detected to be invalid. This shows the % of Traffic that is Classified as Invalid (x Axis), or our "filtration rate" bot traffic, ad hiding, ad injection etc. Source: Google Internal Data (DBM), April 2015





So, what do we do to maintain a healthy ecosystem?






One of the best ways to protect our ecosystem is to be selective about who enters it. We have a very selective entrance rate and accept about only 20% of all publishers who apply. We focus on providers with great, original content and that would create a good experience for both the user and the advertiser.

In addition, we continually audit our network to ensure none of our publishers become complacent or bypass our rules. We've developed 12 years of machine learning to proactively hedge against this in addition to a 1,000 person team just dedicated to evaluating sites.

[https://docs.google.com/presentation/d/1xf4OOzYPCRu3cDmkC1b5I-vPiINtrIo2KyZGzCAOiCE/edit#slide=id.ge5fb4f2dd\\_1\\_0](https://docs.google.com/presentation/d/1xf4OOzYPCRu3cDmkC1b5I-vPiINtrIo2KyZGzCAOiCE/edit#slide=id.ge5fb4f2dd_1_0)

Reach **across inventory** sources at Google scale  
Reach your customers wherever they are across web and apps, safely

		
Exclusive access to <b>Google O&amp;O properties</b> each with 1B+ users	Direct access to Google's network of <b>3M website &amp; apps</b>	Extended reach for remarketing with access to <b>3rd party exchanges</b>

Google

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To get the right reach for your remarketing campaigns, GDN also taps into a growing number of 3rd party ad exchanges that cover the globe, providing extra reach to ensure marketers get in front of users at just the right time.

Additionally, we truly only select the best sites for our network. GDN serves on 65% of comscore's top 200 sites. In addition, through the GDN we have our Own and operated that bring in roughly 1B impressions / month

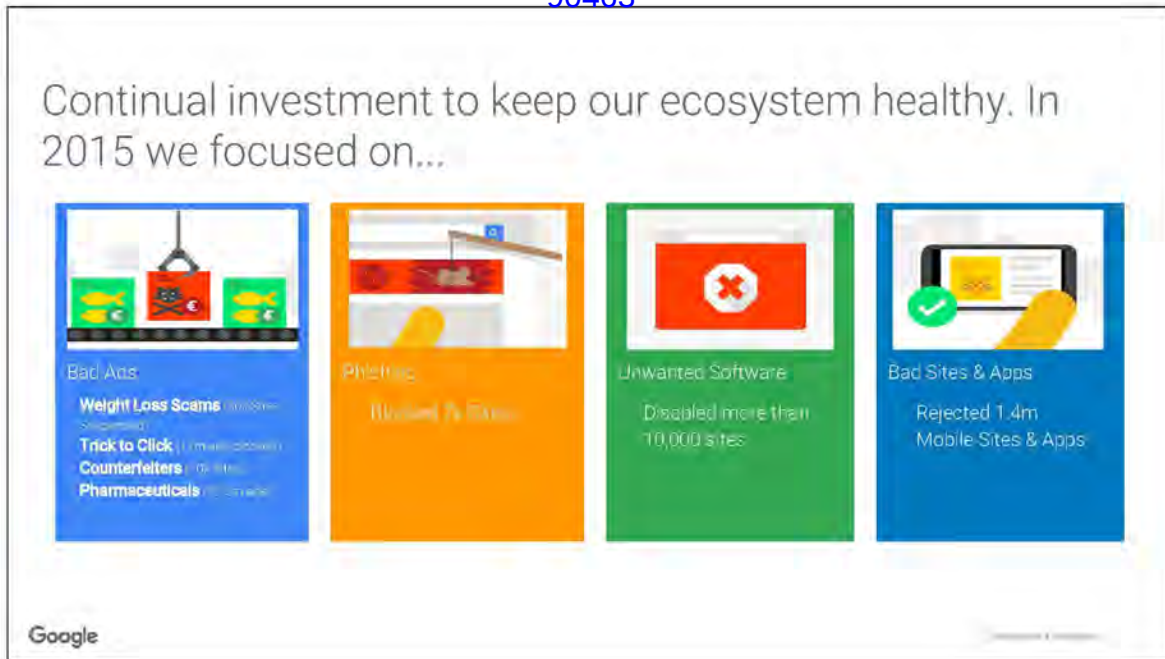
#### 3rd party ad exchanges

We are selective about when we decide to run ads through our third party exchanges via remarketing. We do this through:

Pre-bid invalid traffic filters

Prevents ad hiding, ad injection, misrepresented inventory, and botnets

Ongoing invalid traffic signal collection



Combating fraudulent display ad fraud is part of a wider Google effort to keep our advertising ecosystem clean for users, advertisers, and publishers. Here you can see some of the achievements we:


We have very stringent policies for advertisers as well as the publishers we work with. Advertisers need to comply with our policies or risk being banned for example: We'll ban Combating counterfeit good advertisers and countless other types of bad ads or we won't allow ads that point to sites with malicious software, because that's bad for the user and bad for the whole ecosystem.

we blocked more than 3 million sites potentially fraudulent or low quality sites from joining our network (GDN and AdX) so that will tell you how stringent our pub policies are to ensure

[https://docs.google.com/presentation/d/1UXwnO1EbwqQYF\\_7Y3XWWWDdb71NaQbakC3d-XU6P4A0/edit#slide=id.gd3607c53d\\_1\\_14](https://docs.google.com/presentation/d/1UXwnO1EbwqQYF_7Y3XWWWDdb71NaQbakC3d-XU6P4A0/edit#slide=id.gd3607c53d_1_14)



## Unmatched approach to defending the display network



### Expert reviews

- Publisher approval reviews with highly selective acceptance rate (20%)
- Large internal team reviewing thousands of sites/apps after activation to ensure continued compliance
- We blocked more than 3 million potentially fraudulent or low quality sites
- Banned more than 214,000 advertisers



### Machine learning

- Automated site and app audits to detect infractions
- Removed more than 250,000 publisher accounts for various policy violations
- Disabled more than 500 million bad ads
- MRC-accredited Active View, which lets advertisers buy only those ads that are viewable on a publisher's page

Google

We have an unmatched system in how we protect our ad network. This 1,000 person team is 100% dedicated to reviewing sites - completely separate to our team that audits and reviews invalid click traffic!

We are leading the industry in protecting schemes and groups. For example, the adwords blogpost highlighted that we removed more than 250K publishers for violating our policies. We continually audit and automatically review sites and apps to make sure we catch all infractions.

Finally, we were one of the first to track and measure viewability with our active view. We make sure your ads are seen even when they are publisher pages.

<https://adwords.googleblog.com/2014/01/busting-bad-advertising-practices-2013.html>  
Source: <http://adage.com/article/digital/inside-google-s-secret-war-ad-fraud/298652/>  
Source: [https://docs.google.com/presentation/d/1xf4OOzYPCRu3cDmkC1b5I-vPiINtrIo2KyZGzCAOiCE/edit#slide=id.ge5fb4f2dd\\_1\\_0](https://docs.google.com/presentation/d/1xf4OOzYPCRu3cDmkC1b5I-vPiINtrIo2KyZGzCAOiCE/edit#slide=id.ge5fb4f2dd_1_0) (20% approval rating)

## How we prevent invalid traffic

Google

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So, what do we do to maintain a healthy ecosystem?



#### Policy is often overlooked

Our policies, which we've expanded and fine-tuned over many years, are the backbone of our defenses  
 Subject matter experts are continually assessing and updating our policies to ensure that we stay ahead of bad actors  
 These policies also strike a good balance, providing a fair playing field for everyone who uses our ad systems

#### We haven't been very loud when communicating about our Ad Traffic Quality team externally

Our team of "Warrior Scientists" is comprised of a diverse set of people  
 It's not just engineers: it's a comprehensive team that includes multiple roles  
 We have PhDs and other subject matter experts who live and breathe this stuff

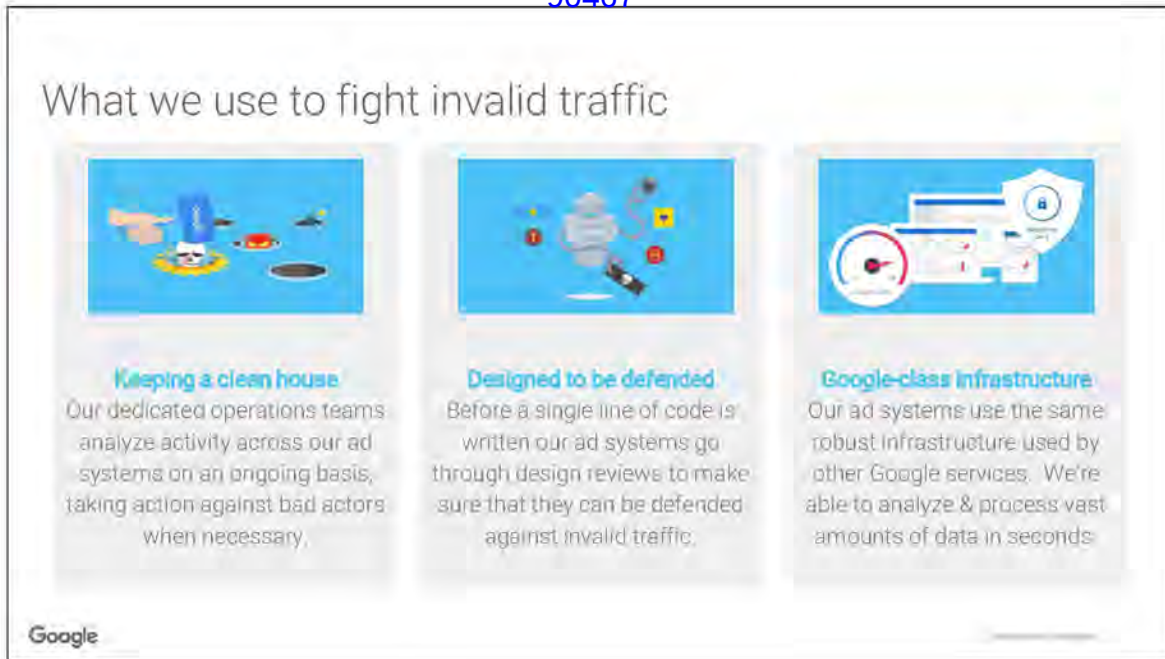
#### The third piece of our proven approach is technology

Our technology builds on the work that our ops and research teams conduct – we first need to understand the threats before we build more permanent defenses against them  
 Our goal in using technology is to provide an automated (lasting) way of defending against invalid traffic

#### Our approach to long-term sustainability is based on a virtuous cycle

We are proactive in our approach to identifying emerging threats  
 Our ops teams continually monitor, analyze, and take action against bad actors  
 As mentioned earlier, our goal is to produce automated ways of defending against invalid traffic  
 But that is the last part of the cycle





Ops is critical to our success

As we mentioned our policies are the backbone of our defenses

Our ops teams rely on these policies to identify bad actors and take action accordingly

Often left out of the discussion is the wisdom we've acquired over the years when it comes to making our systems easier to defend (i.e., hard to compromise)

We've been fighting invalid traffic for some quite some time

So it should come as no surprise that defending against invalid traffic is integrated into just about everything we do

For example, if a new text ad were to launch we would 1) make sure adspam systems were tuned correctly to it and 2) that the ad defends itself from accidental clicks.

Our technology is hard to put into context, as most people typically don't have technical knowledge or something with which to compare the scale and power

As a key player on the web, Google has built up powerful, sophisticated systems and computing power

We tap into those same systems and power for the technology used to defend against invalid traffic

Infrastructure is a fancy term for this, but in essence we're talking about the ability to process massive amounts of traffic and data in very short periods of time

For example, we have a system called Powerdrill that is capable of processing a half trillion cells of data in a less than five seconds (as Ad Age puts it: "It's damn fast")

What you can do  
to protect your ads

Google

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## Full control into brand safety

Google has long offered a variety of exclusionary controls.

Digital Content Labels help standardize brand safety controls across Google, building advertiser trust.

Digital Content Labels are tools that advertisers can use to decide where their ads appear by excluding content based on brand appropriateness providing:

- Additional control over where ads show
- Better alignment between ads and content
- Greater consistency across Google advertising campaigns



**Sensitive content**

- ☐ Crime, justice, and emergency
- ☐ Death and funeral
- ☐ Military and international conflict
- ☐ Lifestyles, group activities
- ☐ Poverty and social inequality
- ☐ Sexually suggestive

**Digital content label**

- ☐ General suitability (G+)
- ☐ Inappropriate with advertising guidelines (G, PG)
- ☐ Teen and young audience (G, T)
- ☐ Adult audience (G, A)
- ☐ Not yet labeled

**Type of placement**

- ☐ YouTube
- ☐ Search results
- ☐ Placed content
- ☐ Email pages
- ☐ In-game
- ☐ Gaming
- ☐ News-related subject
- ☐ Video-related subject

**Video content**

- ☐ In-video
- ☐ Live streaming video
- ☐ On-video user generated content


**Ad location**

- ☐ Surrounding

Google

For those advertisers that are particularly sensitive, you can always add exclusions by sensitive content, type of placement, digital content label, video content label and ad location. This provides additional control over where your ads are seen and allows you to protect your brand image if you have a particularly sensitive industry or product you want to be mindful of. Personally, I prefer to run on the content-not-labeled exclusion. Oftentimes, this is correlated to new sites that have yet to be labeled, and given the new types of fraudsters of 2016 are particularly savvy I like to apply this exclusion as an extra precaution. Feel free to run what you prefer.

You have a choice over placements...




**Show your ads only on specific placements you choose**

If you want to run ads on the Display Network but only on placements you've hand-picked, you can do so with managed placements.

"Demand full transparency and independently verify. If they can't show you where each ad impression was served, don't buy it; put in place your own checks and balances"

Recommendations for reducing fraud



Google

We are one of the few networks that lists out exactly where you're impressions and clicks are coming from. IAB recommends as one of the first actions you take to reduce ad fraud is to capture this degree of transparency. Look over the placements that you run on so you can know exactly where your ads are running.


[https://support.google.com/adwords/answer/2471182?hl=en&ref\\_topic=3119139](https://support.google.com/adwords/answer/2471182?hl=en&ref_topic=3119139)

Quote: <https://www.iab.com/wp-content/uploads/2015/05/IAB-Webinar-Validating-Inventory.pdf>

...And the ability to exclude at different levels

There are several methods for managing and/or excluding placements including:

- Domain
- Subdomain
- Path name
- Individual pages



**Exclude targeting that doesn't perform**

You might exclude websites or domains that aren't appropriate for your brand and that aren't helping you sell your products or services. Also think about applying exclusions for particular audiences or topics that may not be meeting your advertising goals.

Google

We provide full transparency into placements you can exclude. What a lot of people don't realize is that you can exclude not just the domain of a site, but the subdomain, path name, and individual pages. In addition, you can also run exclusions against audiences and topics as well for those advertisers that are very sensitive to particular groupings.

<https://support.google.com/adwords/answer/2471182>

(Specific to Path Name)

Formatting placement exclusions for sites

There are several methods for excluding placements: by domain, subdomain, path name, or individual pages, but not multi-level domains. In general, excluding domains will prevent your ads from appearing on any page on or within that domain, while entering subdomains or paths will only prevent your ads from appearing on any page on or within that subdomain or path, respectively.

Example

Cheryl's company sells organic household cleaning products, and she would like to show their ads only on closely related placements. She targets a popular product review website, and adds a site exclusion for the website paths about food gadgets and home appliances so that her ads don't appear on those pages. By refining where her ads appear, she can show them to the most interest potential customers.



# Appendix

Google

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As you can see, TAG, the leading industry body fighting invalid traffic, has publicly recognized our leadership in this space. Multiple of our colleagues on product teams at Google are members of various TAG working groups



The slide features a blue vertical bar on the left with the text "Industry Recognition" and "Ad Traffic Quality" at the bottom. The main content area is white and contains a quote: "Participants in the digital ad supply chain can now ask a simple question to tell if their partners have taken the necessary steps to fight ad fraud: 'Are you TAG Certified Against Fraud?'" attributed to "— Mike Zanes, CEO, TAG". To the right of the quote is the TAG logo, which consists of concentric circles and the text "tag CERTIFIED AGAINST FRAUD". The Google logo is in the bottom right corner.

We are proud to be part of TAG's 'Certified Against Fraud' initiative  
We've been involved with TAG from its start  
Scott Spencer, a PM Director at Google, is the chair for TAG's Anti-Fraud Working Group



This is an overview of the TAG taxonomy for invalid traffic

We worked with TAG on this taxonomy, which as you can see is comprehensive

There are various types of invalid traffic

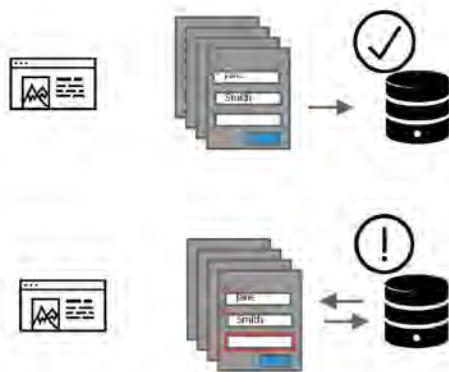
And just as many ways of defending against this type of traffic

We don't expect you to memorize or remember all of this -- what's important is to realize that we have specific labels for invalid traffic

This helps us avoid confusion and communicate consistently

## Improving lead gen quality: server-side validation

- What it prevents: Client-side validation can be bypassed. High value conversions require stronger defenses against this type of spam
- Why it works: Server side validation takes place out of reach of the user and ensures that your client's system verifies data before accepting
- Requirements: Light web development



Google

**Server Side Validation:** All final inputted data is verified by server. This prevents run-time end user manipulation to help prevent against bad data inputs. No negative implications for client servers - small amount of validation code is run when forms are entered.

**Client Side Validation:** Relies on the users system to verify fields. Validation is generally done through Javascript. If Javascript failed to load or was manipulated by a user (through developer tools) the validation would fail allowing anyone to submit anything. Basically, it means that the user's browser (like Chrome) checks for things like invalid formats of emails, phone numbers, etc.. If advanced users bypass the checks, they could submit bad or invalid data to your form. Server side checks can't be manipulated by the end user and thus help weed out invalid data.

Reach **across inventory** sources at Google

Reach your customers wherever they are across web and apps, safely

**APAC PUBLISHER LOGOS**

<p>Exclusive access to <b>Google O&amp;O properties</b> each with 1B+ users</p>	<p>Direct access to Google's network of <b>3M website &amp; apps</b></p>	<p>Extended reach for remarketing with access to <b>3rd party exchanges</b></p>
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We enable advertisers to engage with users with uniquely tailored formats on Gmail, YouTube, and Google Play - each of which have 1B+ users/mth.

Beyond Google's own properties, we work directly with over 2M website and 1M app publishers across vertical categories to help you reach users at all points in the decision cycle, from discovery to purchase.

To get the right reach for your remarketing campaigns, GDN also taps into a growing number of 3rd party ad exchanges that cover the globe, providing extra reach to ensure marketers get in front of users at just the right time.

Additionally, we truly only select the best sites for our network. GDN serves on 65% of comscore's top 200 sites. In addition, through the GDN we have our Own and operated that bring in roughly 1B impressions / month

#### 3rd party ad exchanges

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**EMEA PUBLISHER LOGOS**

**YouTube**

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*Northlight Images*  
**PAPILLES & Pupilles**  
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